

trix memory 78. Data fed to the matrix memory 78 is simultaneously supplied to the control coder-decoder 86 which, apart from a modem function, has the function of providing redundancy reduction for reducing the transmission bandwidth. The frequency multiplexer 88 provides for the simultaneous transmission of voice and redundancy reduced graphical data with the redundancy reduced graphical data being transmitted via a narrow bandpass range within the bandwidth of the telephone channel.

At the distant terminal 58 a reverse ordered sequence is initiated for the recovery of the graphical data beginning with the control coder-decoder 86. The received graphical presentation 110 is fed to the matrix memory 78 via the processing unit 76. Accordingly, on the display screen 32 of one or more distant terminals 58, the transmitted graphical presentations 110 is reproduced. At this time, each of the subscribers is now able to make amendments and corrections to the graphical presentations 110 by touching one of the switching fields 38 with the pen 50 on the resistive coating 42 of any one of the distant terminals 58. The placement of the pen 50 on the resistive coating 42 at any terminal 10 or any distant terminal 58 causes the graphic input for correction to the existing graphic presentation 110 to be deactivated at all other terminals 10 and distant terminals 58. This is because corrections can be made to the graphical presentation 110 at only one terminal 10 or terminal 58 at any particular instant.

By replacing the handset 16 onto the cradle 18, the connection to all subscribers is terminated and the represented functions and setting are erased. Upon lifting the handset 16, the telephone mode is automatically initiated and the image of the dialing keypad 100 appears on the display screen 32. At this point any other mode of operation displayed on the switching fields 38 maybe selected.

The preferred embodiment also provides for receiving and transmitting videotex information. By touching the switching field 38 identified as "videotex center" (shown in FIG. 3) with the pen 50, the processing unit 76 establishes a connection to the videotex modem 90 via selection switch 82. Simultaneously, the data contents of the matrix memory 78 are erased and the plurality of screen-displayed notices 48 (shown in FIG. 5) are stored in the matrix memory 78 and displayed on the display screen 32. The videotex center is then automatically dialed by the processing unit 76. The screen-displayed notices 48 visually indicate the process that has been initiated with the visual representation being cancelled upon establishment of the connection.

As is seen in FIG. 5, the switching fields 38 in the videotex mode of operation are subdivided into partial fields 40. This subdivision is illustrated by a representation of the corresponding lines on the display screen 32. By touching the resistive coating 42 with the pen 50 within the area of the switching fields 38 and the partial fields 40, the represented switching functions are triggered so that contact may be established with the videotex center. Interruption of the existing connection is permitted by touching the switching field 38 entitled "off" (shown in FIG. 5) with the pen 50. An interrupt signal is triggered to terminate the videotex center mode. The communication terminal 10 then returns to the telephone mode of operation and the image of the dialing keypad 100 appears on the display screen 32 as shown in FIG. 3.

Thus, the present invention discloses a telephone set 14 for processing voice communications and an input device 30 for displaying graphical information which is incorporated within the single compact casing 12.

In the preferred embodiment, the extraction of the voltage levels from the resistive coating 42 to form the coordinate values is accomplished by the pen 50. In cases in which the coordinate value input is to be accomplished by an electrically neutral article, a transparent foil 120 (shown in FIG. 2) is preferably disposed at a small spacing from the resistive coating 42. The foil 120 is electrically conductively coated on the side facing the display screen 32. The foil 120 is connected to the circuit component 70. Physical contact between the foil 120 and the resistive coating 42 permits the extraction of the voltage levels locating the point of touch by the electrically neutral article. The voltage levels are then transmitted to and processed by the circuit component 70 as previously described.

Although the present invention has been described in terms of the presently preferred embodiment(s), it is to be understood that such disclosure is not to be interpreted as limiting. Various alterations and modifications will no doubt become apparent to those skilled in the art after having read the above disclosure. Accordingly, it is intended that the appended claims be interpreted as covering all alterations and modifications as fall within the true spirit and scope of the invention.

What is claimed is:

1. A communication terminal for processing voice and graphical information comprising, in combination:
  - an external casing having a compact design and including a cradle;
  - a telephone set housed within said compact casing and including a handset electrically connected to said compact casing for processing voice communications, said cradle being configured for supporting said handset;
  - an input device mounted within said compact casing for establishing communication with at least one of a plurality of distant communication terminals, said input device including a flat display screen having a presentation portion and a switching field portion, said presentation portion being provided for the display of graphical information and said switching field portion being provided for initiating the selection of a plurality of switching functions;
  - transparent resistive coating means mounted above said flat display screen, said resistive coating means being electrically conductive;
  - a processing unit in electrical communication with said input device for initiating the performance of said plurality of switching functions and for the display and distribution of said graphical information, said processing unit including means for displaying a dialing keypad on the presentation portion of said flat display screen enabling the dialing of said telephone set;
  - circuit component means in circuit relation with said transparent resistive coating means for providing coordinate value electrical signals thereto;
  - a pen electrically connected to said circuit component means and manually applied to said resistive coating means of said flat display screen for extracting the coordinate value electrical signals for selecting one of said plurality of switching functions, said plurality of switching functions includ-